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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,004	07/28/2000	Kenji Ito	0905-0243P-SP	3116

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EXAMINER

LINTON, HEDLEY O

ART UNIT	PAPER NUMBER
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2615

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DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/628,004

Applicant(s)

ITO, KENJI

Examiner

Hedley Linton

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malkin et al (US Patent No: 6614474) in view of Safai (US Patent No: 6593963) and further in view of Nagashima (US Patent No: 4791308).

3. Regarding claim 1, Malkin et al disclose a digital camera comprising an imager and a scaler for imaging a subject by a solid state image sensing device and outputting a video signal that represents the image of the subject obtained by imaging upon down-sampling the video signal at a given down-sampling ratio (Malkin et al, figure 1, items 100 and 200; column 1, lines 48-62). Although not specifically stated, it is well known in the art that the imager and scaler referred to above may be combined into one unit and whether this is done is just a matter of design choice. Also, please take official notice that it is well known to image subjects by a camera at such standard fixed periods as 1/60 or 1/30 of a second. An electronic-zoom command unit for applying an electronic zoom command and a zoom magnification is inherent in the controller since the controller sends electronic zoom signals to the scaler (Malkin et al figure 1, item 400). Furthermore, a zoom unit for subjecting the video signal output from the imaging unit to electronic zoom processing in accordance with the zoom magnification, which has been

applied from the electronic-zoom command unit, in such a manner that an image represented by the video signal output from the imaging unit will be enlarged is inherent in the scaler since the scaler receives the zoom command signal and performs the magnification (Malkin et al figure 1, item 200; column 1, lines 60-62). Although the electronic zoom command is applied to the scaler (down-sampling ratio control unit), Malkin et al do not disclose that the down-sampling ratio may be reduced in response to the application of the electronic zoom command from the electronic zoom command unit nor is a display control unit or a display device disclosed.

It is well known in the art and common practice to include in a digital camera a display and a display controller for controlling the display. The display enables the user to determine whether to keep an image or discard it among other functions. Safai discloses a digital camera system including a display controller for performing control in such a manner that the image represented by the video signal output from the imaging unit will be displayed on the display device (Safai figure 3, items 317 and 318; column 5, lines 50-65). However Safai does not disclose a down-sampling ratio control unit for reducing the down sampling ratio.

Nagashima discloses an image pick-up device having variable magnification, wherein the image resolution is never deteriorated by changes in the image pick-up magnification. In the Nagashima device, a mode input terminal is arranged to receive a mode signal that indicates the image magnification and a controller is arranged to send control signals to decoders in order to set the magnification. When "one magnification mode" is set the controller adjusts the down sampling ratio in response to the

magnification (electronic zoom command) mode signal (Nagashima column 1, lines 57-66; column 2, lines 25-30; figure 1, item 1; column 4, lines 39-44; column 5, lines 29-25). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Malkin et al so as to include a display control unit and a display device as taught by Safai, for performing control in such a manner that the image represented by the video signal output from the imaging unit will be displayed on the display device, since it is well known in the art to do so and the display would enable the user to determine whether to keep an image or discard it and capture another. Also, it would have been further obvious to one of ordinary skill in the art at the time the invention was made to modify the above modification using the teachings of Nagashima so as to enable the scaler (down sampling ratio control unit) to reduce the down sampling ratio in response to application of the electronic zoom command (magnification mode input signal) from the electronic zoom command unit so as to keep the image resolution from deteriorating during magnification.

4. Regarding claim 2, see examiner's comments on claim 1 above and not that the combination above is not limited to $\frac{1}{2}$ or 1 (one) magnification (Nagashima column 6, lines 67+; column 7, lines 1-3). Therefore it is obvious that the invention includes the possibility of changing the magnification so as to allow, for example, the 1000X1000 pixels from the imaging unit to be displayed on a 2000X2000 pixel display. This is commonly known as up sampling and is merely down sampling at a given ratio of 2/1. Furthermore official notice is hereby given that it is well known in the art to do this in order to utilize a display having a greater number of pixels than the number of pixels in

the imaging unit. Thus the number of lines of an image represented by a video signal that has undergone zoom processing by the zoom unit would be greater than the number of lines of an image represented by a video signal output from the imaging unit.

5. Regarding claim 3, see examiner's comments on claim 1 above and note the Hand V sync signals applied to imager and scaler in the combination as applied to claim 1 above (figure 1 of Malkin et al).

6. Regarding claim 5, examiner's comments on claim 1 above are hereby applied.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Malkin et al, Safai and Nagashima as applied to claim 1 above, and further in view of Sasaki et al (US Patent No: 5034804).

8. Regarding claim 4, the combination of Malkin et al, Safai and Nagashima as applied to claim 1 above discloses all the limitations except wherein the camera is provided with a mode setting switch for setting an image-quality priority mode. However it is well known in the art to do so as evidenced by Sasaki et al's disclosure of a digital still camera with various modes of data compression. In Sasaki et al a mode switch is used to set the image quality mode thereby enabling the user to set a desired image resolution, with the higher resolution or image quality requiring a greater number of pixels. Furthermore, the user is able to determine the amount of images captured and stored in memory by the image-quality mode that is set (Sasaki et al column 4, lines 58+; column 5, lines 1-12). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made further modify the combination as applied to claim 1 above so as to include a mode setting unit for setting an image-quality mode

as taught by Sasaki et al since this would allow the user to set a desired image resolution thereby enabling adjustment of the memory capacity of the device. The down sampling ratio control unit would then be configured to adjust the down sampling ratio in accordance with the image-quality priority mode set by the user, since different resolutions require different amounts of pixels which translates to different down sampling ratios.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

10. Claim 5 recites the limitation "said method" in page 18, line 21. There is insufficient antecedent basis for this limitation in the claim.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hidaka et al US Patent No: 6411361.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hedley Linton whose telephone number is (703) 305-4693. The examiner can normally be reached on 9am-6:30pm, Mon-Thu; 9am-5:30pm every other Fri..

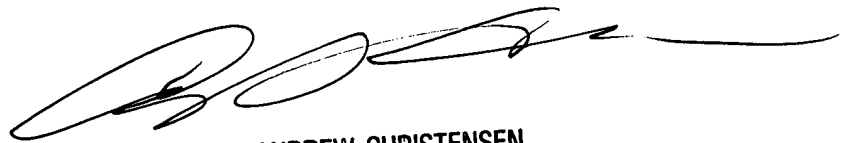
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (305) 305-4700.

Hedley Linton
Examiner
Art Unit 2615
October 20, 2003

A handwritten signature in black ink, appearing to read 'Andrew Christensen', with a long horizontal flourish extending to the right.

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600